of patients with schizophrenia. **RESULTS:** 1208 patients with schizophrenia were included in the study, and followed for 2 years. Mean GAF score at baseline was 51.34 (SD: 16.06) ranging from 11 to 98. MCID values retrieved from the anchor-based approaches were 2.92 and 3.8, for within- and between-patient methods, respectively, when using CGI as external criterion. MCID values retrieved from the distribution-based approaches were 9.43, 11.70 and 3.20 when conducting the analysis using standard error measurement approach, standard deviation approach and effect size, respectively. **CONCLUSIONS:** As in many MCID analyses, although the objective is to provide a unique threshold value, the different methods produce a variety of MCID values. MCID values retrieved in the present study are very disparate, ranging from 2.92 to 11.70. As anchor-based measure are generally preferred to distribution-based measures, we suggest using 4 as the MCID for GAF, reflecting the smallest difference that clinicians would deem important. MCID estimates may help clinicians and researchers design future studies and interpret treatment effect.

PMH3

BURDEN ASSOCIATED WITH AGITATION IN SCHIZOPHRENIA

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OBJECTIVES: Clinical management of agitated patients with schizophrenia is a common objective in inpatient units and other settings. Being defined as a state characterized by motor restlessness, excitement, and mental tension, agitated patients may become a threat to others, act out violently, and also lead to suicidal thoughts and behaviors. The purpose of this study is to describe the agitated schizophrenic population. **METHODS:** We worked on data from a large longitudinal cohort of patients with schizophrenia, including a battery of questionnaires every 6 months for up to 24 months. Patients with a positive and negative syndrome scale (PANSS) Excited Component higher than 14 and a score of 4 or higher on at least one item, were identified as agitated at baseline. As five assessments were performed over 2 years, pathways of agitated patients were explored. Bivariate analyses were conducted to compare agitated patients with others in terms of severity of symptoms (PANSS), quality of life (EQ-5D), functioning (Global Assessment of Functioning, GAF), side effects, depression (Calgary Depression Scale for Schizophrenia, CDSS) and resource use. **RESULTS:** 5% of patients were identified as agitated at baseline. This rate was very stable at 6, 12, 18 and 24 months. Agitated patients were found to have more severe symptoms (PANSS 95.15 vs. 55.23 $p<0.0001$), lower functioning (GAF: 39.9 vs. 51.99 $p<0.0001$), and more severe side effects (AIMS: 4.15 vs. 2.66 $p=0.07$). For each type of service, resource use was consistently higher for agitated patients when compared to others. No difference was found in terms of quality of life or depression level. **CONCLUSIONS:** Our study suggests that agitated patients with schizophrenia form a stable population overtime with a high clinical burden. Research on management of agitated is of key importance in schizophrenia.

PMH4

COMPARATIVE EFFECTIVENESS IN TERMS OF TREATMENT DISCONTINUATION OF ORODISPERSABLE VERSUS. STANDARD ORAL OLANZAPINE TABLETS IN NON-ADHERENT PATIENTS: RESULTS FROM A 1-YEAR EUROPEAN OUTPATIENT OBSERVATIONAL STUDY

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OBJECTIVES: Medication non-adherence is common in the treatment of patients with severe mental illness. Different formulations have been developed in an effort to improve medication adherence. The aim of this study is to explore whether there is a differential impact on treatment discontinuation between two different formulations of olanzapine: orodispersible (OD) or standard oral tablets (SOT) for the treatment of non-adherent patients with schizophrenia or bipolar disorder. **METHODS:** This post-hoc analysis included 266 non-adherent patients diagnosed either with schizophrenia or bipolar disorder from an observational study (n=927) that measured the proportion of patients who discontinued treatment for any reason with olanzapine OD or SOT formulations over a 1-year period. Non-adherence was defined as having a baseline rating from 0 to 4 in the Medication Adherence Rating Scale (MARS). Treatment discontinuation was defined as discontinuing or adding a new antipsychotic to the index medication. A Kaplan Meier estimation of time to medication discontinuation was calculated. A Cox regression model adjusting for covariates was fitted to study the effect of baseline treatment on time to discontinuation. **RESULTS:** Patients treated with OD (n=177) vs. SOT (n=89) were more severe as measured by the Clinical Global Impression scale (CGI) (4.63 [SD 1.03] vs. 4.0 [SD 1.16], $p < 0.0001$) at baseline. During the 1-year follow up period the Kaplan Meier graph showed that patients treated with OD were less likely to discontinue treatment (11% vs. 27%, $p<0.01$). The Cox regression showed that patients taking OD had a significantly lower risk of discontinuing their baseline medication compared to patients taking SOT (hazard ratio: 0.35; 95% CI: 0.15-0.80). **CONCLUSIONS:** Treatment discontinuation was low with both olanzapine formulations; however the use of the orodispersible formulation in non-adherent patients with schizophrenia or bipolar disorder was associated with a significantly lower treatment discontinuation rate over a 1-year period.

PMH5

MINIMUM CLINICALLY IMPORTANT DIFFERENCE IN THE CALGARY DEPRESSION SCALE FOR SCHIZOPHRENIA

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OBJECTIVES: No Minimum Clinically Important Difference (MCID) for the Calgary Depression Scale for Schizophrenia (CDSS) has been reported yet. This scale, ranging from 0 to 27, assesses the level of depression in schizophrenia. The objective of this study was to generate a MCID for the CDSS, based on a longitudinal cohort of patients with schizophrenia. **METHODS:** Two methods exist to assess MCID in scales such as CDSS: the anchor-based approach (comparison of the change in CDSS score and Clinical Global Impression (CGI) within- and between-patients), and the distribution-based approach (comparison between the change in PRO scores and some measure of variability, including standard error measurement approach, standard deviation approach and effect size). Both methods were implemented in a longitudinal cohort of patients with schizophrenia. **RESULTS:** 1208 patients with schizophrenia were included in the study, and followed for up to 2 years. The mean CDSS score at baseline was 2.88 (SD: 3.57), ranging from 0 to 22. MCID values obtained from the anchor-based approaches were 0.89 and 1.26, for within- and between-patient methods, respectively, when using CGI as external criterion. MCID values obtained from the distribution-based approaches were 1.47, 1.70 and 0.71 when conducting the analysis using standard error measurement approach, standard deviation approach and effect size, respectively. **CONCLUSIONS:** As in many MCID analyses, although the objective is to provide a unique threshold value, the different methods produce a variety of MCID values. Nevertheless all MCID values retrieved in the present study were of the same order of magnitude. We therefore suggest using 1.3 as the MCID for CDSS, reflecting the smallest difference that clinicians would deem important. MCID estimates may help clinicians and researchers design future studies and interpret treatment effect.

PMH6

EVOLUTION OF DEPRESSIVE STATUS IN PATIENTS WITH SCHIZOPHRENIA: AN ANALYSIS OF PATIENT TRAJECTORIES

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OBJECTIVES: The majority of studies on depression among patients with depression reports means or percentages which obscure changes in depressive status over time. Trajectory description analysis may provide a more nuanced picture of the evolution of depressive status of patients. The objective of this study was to identify, in a large sample of patients with schizophrenia, distinct groups of patients with different trajectories of depressive symptoms. **METHODS:** We used fata from a longitudinal observational cohort of 1208 patients with schizophrenia. Patients answered the Calgary Depression Scale for Schizophrenia (CDSS) questionnaire every 6 months for up to 2 years. Several cut-points were used, to distinguish patients with and without depression. Depression rates were calculated at each visit, independently, and depending on the patient's previous status. **RESULTS:** Rates of depression at the baseline visit were 39.7% and 20.2%, when considering cut-points of 3 and 6, respectively. Among the 477 and 243 patients considered as depressive at baseline, 41.8% and 59.6% changed status after 6 months when considering cut-points of 3 and of 6, respectively. Similarly, among the 724 and 958 patients considered as non-depressive at baseline, 18.2% and 9.9% changed status after 6 months. These results were relatively stable over time, when considering each pair of successive visits. Additional analyses also showed that functioning level and quality of life paralleled these trajectories over time. **CONCLUSIONS:** Trajectory analysis allowed us to detect different groups of patients, with specific characteristics and different trajectories. Our larger sample size allowed identifying levels of various characteristics at baseline and over time as being associated with each trajectory.

PMH7

EVOLUTION OF PRESENCE OF PREDOMINANT NEGATIVE SYMPTOMS IN PATIENTS WITH SCHIZOPHRENIA

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OBJECTIVES: Patients with schizophrenia often remain symptomatic with predominant negative symptoms (PNS) despite receiving antipsychotic therapy. Several definitions of PNS are published in the literature. The purpose of this study is to compare evolution of patients with and without PNS over time, and to explore the predictive status of PNS in terms of quality of life, depression and resource use, considering several definitions. **METHODS:** Fifteen definitions of PNS were retrieved from literature, out of which 3 were applied in a longitudinal cohort of patients with schizophrenia (N=1208). Clinical characteristics, depression, functioning, medication, quality of life and resource utilization were assessed at baseline and at 6 months, and compared between subgroups of patients (with/out PNS at baseline and at 6 months). Reasons of PNS status change were described for each definition. Regression models were used to explore the predictive status of PNS in terms of quality of life, depression and resource use. **RESULTS:** According to the 3 definitions used, severity of positive symptom significantly increased in patients with PNS at baseline but not at 6 months. Negative symptoms decreased to a lesser extent. Patient functioning, depression, medication, quality of life and resource utilization evolution were not consistent across definitions. According to all the definitions, PNS status at baseline was associated with change from baseline in terms of depression, quality of life, number of GP visits and number of hospitalization days, when adjustments were taken into account. **CONCLUSIONS:** Our study suggests that PNS status at a specific time point is associated with depression, quality of life and resource utilization evolution at 6 months. Results also show that patients with PNS at a specific time point not showing PNS 6 months later are not associated with better outcomes. This confirms that schizophrenic patients with PNS form a severe population, and required further analyses.

PMH8

FUNCTIONAL IMPAIRMENT AND COGNITIVE DYSFUNCTION IN DEPRESSED PATIENTS IN SOUTH-KOREA: RESULTS OF PERFORM-K

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OBJECTIVES: PERFORM-K (ePidEmiological Research on Functioning Outcomes Related to Major depressive disorder (MDD) in South-Korea) is a cross-sectional observational study conducted in South-Korea, with similar selection criteria and assessment to the PERFORM study in Europe. The main objective of the study is to describe the functioning of patients with MDD, the impact of cognitive dysfunction and the factors associated with functional impairment. **METHODS:** 343 outpatients were recruited by psychiatrists. Inclusion criteria were: DSM-IV-TR diagnosis of MDD, 19 to 65 years antidepressant monotherapy (initiation or first switch). Depression severity was evaluated with MADRS (Montgomery–Åsberg Depression Rating Scale) by psychiatrists and PHQ-9 (Patient Health Questionnaire 9-item) by patients. Functioning was measured by SDS (Sheehan Disability Scale), work productivity by WPAI (Work Productivity and Activity Impairment Questionnaire) and cognitive dysfunction by PDQ-D (Perceived Deficit Questionnaire-Depression). Descriptive analyses from functioning and activity questionnaires were complemented with multivariate ANCOVA. **RESULTS:** The 312 analyzable patients had a mean age of 45.2 years. 74.0% were women, 41.7% were employed and 22.8% had their treatment switched when visiting their psychiatrists. Mean MADRS and PHQ-9 scores were respectively 28.9 and 16.0 respectively. Overall functioning was impaired (mean SDS=16.7), as was overall activity (57.9% impairment on WPAI-4); 25.1% of the patients reported a PDQ-D score $\geq$ 44. In multivariate analyses, overall functional impairment (SDS) was associated with greater depression severity (p=0.022), greater patient-reported cognitive dysfunction (p<0.001), presence of sick leave in previous 12-months (p=0.004), younger age (p=0.011) and region (p = 0.004). Overall activity impairment (WPAI-4) was associated with greater depressive severity (p=0.043), greater cognitive dysfunction (p<0.001) and younger age (p=0.001). **CONCLUSIONS:** Functional impairment in MDD is not only associated with the severity of depression, but also with cognitive function, previous sick leave, age and region. This is consistent with findings from PERFORM in Europe.

PMH9

PREVALENCE OF MAJOR DEPRESSIVE DISORDER IN CHINA

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OBJECTIVES: To review literatures that reported prevalence/incidence related to Major Depressive Disorder (MDD) in China. **METHODS:** A structured literature review on published articles in both English and Mandarin language was conducted. Search engines used for literature review were PUBMED, Cochrane Library, Wan Fang and VIP database.The review included primary studies or meta-analyses of prevalence or incidence studies of MDD published between 2000 and 2013 on Chinese population based in China only (including Hong-Kong and Macau). Four reviewers (two for each language) reviewed and extracted all relevant information from the selected articles. **RESULTS:** One meta-analysis and 7 studies not included in the meta-analysis were identified. In the meta-analysis, the nationwide point prevalence of MDD was estimated to be 1.6% (95% CI: 1.2-1.9), 12-month prevalence to be 2.3% (95% CI: 1.8-5.5) and lifetime prevalence to be 3.3% (95% CI: 2.4-4.1). Point prevalence was higher in rural compared to urban areas. The other studies conducted across different regions reported point prevalence ranging from 3.6% to 9.4%, 12-month prevalence from 3.8% to 8.4% and lifetime prevalence of 6.5% to 10%. A hospital-based study reported higher estimates (point prevalence of 7.5% and lifetime prevalence of 10%), possibly reflective of higher prevalence of MDD in patients with physical comorbidity or patients seeking help at hospitals. 11.0% to 16.3% of patients with MDD were reported to have attempted suicide within 1 year, more frequently among patients from rural compared to urban area. About 27-28% of patient who committed suicide had history of MDD. **CONCLUSIONS:** The prevalence of MDD in China reported was variable between regions. The possible reason for this difference could be due to geographical and methodological differences. However, the reported prevalence was lower compared to that in western countries. Overall, the burden of MDD in China remains high due to its large population size.

MENTAL HEALTH – Cost Studies

PMH10

GLOBAL ECONOMIC BURDEN OF SCHIZOPHRENIA: A SYSTEMATIC REVIEW

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OBJECTIVES: Schizophrenia is one of the most devastating mental illnesses. Despite low prevalence, health and economic consequences related to schizophrenia have been significant. Economic burden studies have been used to measure the magnitude of the burden of this under-diagnosed and under-treated disabling condition to the society. To understand how previous studies on estimating economic burden of schizophrenia have been conducted, the present systematic review focuses on the methodology undertaken by these studies. **METHODS:** Pubmed, EMBASE and PsycINFO were searched for publications from inception to October 2013. Inclusion criteria were: (i) article measuring cost of schizophrenia; (ii) article reporting economic burden; (iii) information on the primary cost data was available; and (iv) article in English. Data from all eligible articles were extracted using a standardised data collection form. Costs were converted to 2013 USD. **RESULTS:** Forty studies were included covering 24 countries – 12 countries (50%) in Europe. Almost half of the studies (55%) were conducted at selected institutions while 35% at the national level. Prevalence-based approach was adopted in 95% studies, while only 5% used incidence-based estimation. Costs were determined using bottom-up (45%), top-down (33%) or combination of both (23%). Electronic databases (68%) and patient/family/health care provider (60%) were the main data sources used. The total annual direct medical costs reported in the national studies varied from USD 30 to 29,316 million and direct non-medical costs from USD 32 to 12,029 million. Indirect costs ranged from USD 63 to 41,767 million per year, contributing to 49-89% of the total annual costs associated with schizophrenia. **CONCLUSIONS:** Schizophrenia imposes a substantial economic burden on society mainly driven by high indirect costs. The cost estimates varied due to methodology differences and costs included. The information of disease burden associated with schizophrenia is crucial to enable informed decision-making in allocating health care resources.

PMH11

BURDEN OF ILLNESS OF DEMENTIA IN CHINA

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OBJECTIVES: Due to the rapidly aging population, dementia is becoming a great concern in China. Moreover, dementia is associated with an important economic burden. The objective of this study was to provide an estimation of the economic burden of dementia in China with and without an adequate treatment. **METHODS:** A Markov model was developed to simulate transition between a mutually exclusive set of health states associated with dementia. Average annual economic burden was estimated between patients treated from moderate to severe and patients not treated, over a five-year time horizon. The resource categories taken into account in the model were treatment, hospitalisations, nursing-home care, biological analyses, imaging, scales and professional caregiver costs. Transition probabilities were estimated from clinical trials. The resource utilisation and unit costs were provided by a Delphi panel. According to the China Alzheimer's project, there are 10 million dementia patients currently in the country and it is estimated that only 21.3% of them take medicine. **RESULTS:** Over the five year, each untreated dementia patient cost on average 40,006 RMB per year, and each treated patient cost 36,503 RMB per year. Given current dementia patients of 10 million in China, and a treated probability of 21.3%, the annual total costs resulted in an economic burden of 392.6 billion RMB per year for dementia patients in China. Because of the demographic evolution of the Chinese population, the number of dementia patients is expected to increase. Increasing the proportion of treated patients might be a way to limit the raise of the burden, as the treatment help to reduce the average annual health care costs. **CONCLUSIONS:** Burden of dementia in China is likely to grow since the expanding ageing population. Adequate disease management using available treatment may be an efficient solution to limit costs.

PMH12

ECONOMIC BURDEN OF DEMENTIA IN SINGAPORE: PRELIMINARY RESULTS

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OBJECTIVES: With a rapidly ageing population, dementia has become a major public health problem worldwide. Around 28,000 Singaporeans aged 60 and above have dementia, and the number is projected to hit 80,000 by 2030, imposing a potentially significant economic burden on individuals and society which has yet to be quantified. Therefore we sought to assess the annual economic burden of dementia in Singapore and to identify the main cost components. **METHODS:** In this cross-sectional study approved by the SingHealth Centralised Institutional Review Board, consecutive patients seen at the dementia clinic of National Neuroscience Institute (NNI) between August 2013 and December 2014 were recruited. Singapore residents meeting the National Institute of Neurological Disorders and Stroke criteria for the diagnosis of dementia with follow-up of at least 6 months at NNI were included. Caregivers of eligible patients were interviewed with a financial burden questionnaire to collect direct and indirect costs related to dementia over the past 12 months from a societal perspective. **RESULTS:** Of 60 patients aged 54-91 years (median: 74) recruited, 90% were Chinese, 42% were men, and 38% had Young Onset Dementia (YOD) (defined as dementia onset before age 65). Annual total cost of dementia was SGD28341 per patient (i.e. $793 million for the country), with direct cost constituting 23% and indirect cost constituting 77%. The main cost components for direct medical cost, direct non-medical cost, and indirect cost were pharmacotherapy (52%), home care (45%), and productivity loss (72%), respectively. As expected, the indirect cost of YOD patients was significantly higher than non-YOD patients. **CONCLUSIONS:** Dementia imposes a considerable economic burden in Singapore. As productivity loss accounts for a large share of the burden especially in YOD group, programs to improve early diagnosis, raise public awareness about the disease, reduce stigma and provide better support to caregivers are urgently needed.

PMH13

ECONOMIC BURDEN OF SCHIZOPHRENIA IN CHINA: BASED ON MEDICAL INSURANCE DATABASE FROM GUANGZHOU CITY

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OBJECTIVES: As reported by Chinese Center for Disease Control and Prevention in 2009, there have been more than 10 million patients with schizophrenia in China, with the incidence of about 7.81‰. This article is to evaluate the economic burden of schizophrenia in Chinese city based on societal perspective and to detect its impact factors. **METHODS:** 2010-2012 databases of Urban Employee Basic Medical Insurance and Urban Residents Basic Medical Insurance, as well as disability adjusted life year (DALY), were used to estimate direct cost and indirect cost caused by schizophrenia in Guangzhou, which is a large city in China with a population of over 8.5 million and the per capita GDP of approximately US$16,000. **RESULTS:** During 2010-2012, direct costs of schizophrenia in Guangzhou city were RMB 95.69 million, 168.62 million, and 197.70 million (US$ 14.72 million, 25.94 million, and 30.42 million); indirect costs of schizophrenia were RMB 1,096.68 million, 1,201.89 million, and 1,375.08 million (US$ 168.72 million, 184.91 million, and 211.55 million). The ratio of direct economic loss to indirect economic loss was 1 to 8.5. Direct cost and indirect cost caused by schizophrenia in Guangzhou city were increasing in recent years. Medical costs of inpatients and people with Urban Employee Basic Medical Insurance mainly